



ENSECO-CAL LAB

POLYCHLORINATED DIOXIN/FURAN ANALYSIS

TICKET NO. 29565

CLIENT ID: SH734036-03-02 - Date Analyzed: 6/8/87 Column: DB-5

CAL ID: 29565-3

Weight: 10.38G

FURANS	AMOUNT FOUND (ng/g)	DETECTION LIMIT (ng/g)
tetra (total) (2378)	0.29 ND	- 0.046
penta	ND	0.057 **
hexa	ND	0.037 **
hepta	ND	0.10 **
octa	ND	0.075 **

* Recovery 13C-2378-TCDF = 32%

ND = Not Detected

** Chemical Interference

PREPARED BY: DS

APPROVED BY: BSM

DATE: 6/18/87

Ens

ENSECO-CAL LAB
QUALITY CONTROL SUMMARY

CASE NO: 29565

CLIENT ID: SH734036-03-02 Native Spike

CAL ID: 29565-3NS

FURANS	ng/g Found in Sample	ng/g Spiked	ng/g Found in NS Sample	NS % Recovery
2,3,7,8-TCDF	ND	0.97	1.09	113%
penta (12378)	ND	0.97	0.88	91%
hexa (123478)	ND	0.97	0.89	92%
hepta (1234678)	ND	0.97	0.90	93%
octa (total)	ND	4.8	7.4	153%

PREPARED BY: gf

APPROVED BY: Bsin

DATE: 6/17/07

Enseco

ENSECO-CAL LAB
QUALITY CONTROL SUMMARY

CASE NO: 29565

CLIENT ID: SH734036-03-02 Native Spike Duplicate

CAL ID: 29565-3NSD

FURANS	ng/g Found in Sample	ng/g Spiked	ng/g Found in NS Sample	NS % Recovery
2,3,7,8-TCDF	ND	0.96	0.78	82%
penta (12378)	ND	0.96	0.76	79%
hexa (123478)	ND	0.96	0.63	66%
hepta (1234678)	ND	0.96	0.60	63%
octa (total)	ND	4.8	56.0	112%

PREPARED BY: QF

APPROVED BY: BM

DATE: 6/7/87

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recycle and environment

US0238

Enseco

ENSECO-CAL LAB

POLYCHLORINATED DIOXIN/FURAN ANALYSIS

TICKET NO. 29565

CLIENT ID: Method Blank Date Analyzed: 6/8/87 Column: DB-5

CAL ID: 29565-MB

Weight: 10.0G

FURANS	AMOUNT FOUND (ng/g)	DETECTION LIMIT (ng/g)
tetra (total)	ND	0.0040
penta	ND	0.022
hexa	ND	0.0086
hepta	ND	0.011
octa	ND	0.024

* Recovery 13C-2378-TCDF = 74%

ND = Not Detected

PREPARED BY: glAPPROVED BY: bsmDATE: 6/17/87

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US0239

ENSECO INC. (Part 5a) Pg 5 of 25

Sample Number

SH734C3C-02-03

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted / Prepared 6-10-87
 Date Analyzed 6-18-87
 Conc/Dil Factor: 9.5
 Percent Moisture (Decanted) 18

GPC Cleanup ☐ Yes ☒ NoSeparatory Funnel Extraction ☐ YesContinuous Liquid-Liquid Extraction ☐ Yes

CAS Number	Compound	ug/l or ug/Kg (Circle One)
108-95-2	Phenol	3700u
111-44-4	bis-2-Chloroethyl Ether	3700u
95-57-8	2-Chlorophenol	3700u
541-73-1	1,3-Dichlorobenzene	3700u
105-46-7	1,4-Dichlorobenzene	3700u
100-51-6	Benzyl Alcohol	3700u
95-50-1	1,2-Dichlorobenzene	3700u
95-48-7	2-Methylphenol	3700u
39535-32-9	bis(2-chloroisopropyl) Ether	3700u
105-44-5	4-Methylphenol	3700u
621-64-7	N-Nitroso-Di-n-Propylamine	3700u
67-72-1	Hexachloroethane	3700u
98-95-3	Nitrobenzene	3700u
78-59-1	Isophorone	3700u
88-75-5	2-Nitrophenol	3700u
105-67-9	2,4-Dimethylphenol	3700u
65-85-0	Benzoic Acid	1900u
111-91-1	bis-2-Chloroethoxy Methane	3700u
120-83-2	2,4-Dichlorophenol	3700u
120-82-1	1,2,4-Trichlorobenzene	3700u
91-20-3	Naphthalene	3700u
106-47-8	4-Chloroaniline	3700u
87-68-3	Hexachlorobutadiene	3700u
59-50-7	4-Chloro-3-Methylphenol	3700u
91-57-6	2-Methylnaphthalene	3700u
77-47-4	Hexachlorocyclopentadiene	3700u
88-06-2	2,4,6-Trichlorophenol	3700u
95-95-4	2,4,5-Trichlorophenol	1900u
91-58-7	2-Chloronaphthalene	3700u
88-74-4	2-Nitroaniline	1900u
131-11-3	Dimethyl Phthalate	3700u
208-96-8	Acenaphthylene	3700u
99-09-2	3-Nitroaniline	1900u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	620u
51-28-5	4-Dinitrophenol	3700u
100-02-7	1-Nitrophenol	3700u
132-64-9	Dibenzofuran	520u
121-14-2	2,4-Dinitrotoluene	3700u
606-20-2	2,6-Dinitrotoluene	3700u
84-66-2	Diethylphthalate	3700u
7005-72-3	4-Chlorophenyl-phenylether	3700u
96-73-7	Fluorene	1100u
100-01-6	4-Nitroaniline	3700u
534-52-1	4,6-Dinitro-2-Methylphenol	3700u
85-39-6	N-Nitrosodiphenylamine (1)	3700u
101-55-3	4,8-Dimorphenyl-phenylether	3700u
118-74-1	Hexachlorobenzene	3700u
87-86-5	Pentachlorophenol	3700u
85-01-8	Phenanthrene	1700u
120-12-7	Anthracene	3700u
84-74-2	Di-n-Butylphthalate	4500u
206-44-0	Fluoranthene	3700u
129-00-0	Pyrene	3700u
85-68-7	Butylbenzylphthalate	3700u
91-94-1	2,3-Trichlorobenzidine	7000u
56-55-3	Benzobenzanthracene	2000u
117-81-7	bis(2-Ethylhexyl)Phthalate	2100u
218-01-9	Chrysene	2100u
117-84-0	Di-n-Octyl Phthalate	5000u
205-99-2	Benzobifluoranthene	2600u
207-08-9	Benzobifluoranthene	2800u
50-32-8	Benzofluoranthene	2100u
193-39-5	Indeno(1,2,3-cd)Pyrene	1100u
53-70-3	Dibenz(a,h)anthracene	4700u
191-24-2	Benzofluoranthene	1200u

(1) Cannot be separated from diphenylamine

d = correction

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Form 1

recycled paper

ecology and environment

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5473/0360203

Organics Analysis Data Sheet
(Page 3)

Pesticide / PCBs

Concentration Low Medium (Circle One)
Date Extracted / Prepared 6-10-87
Date Analyzed 6-26-87 7-29-87
Conc/Dil Factor 10
Percent Moisture (decanted) 18 pH = 7

GPC Cleanup ☐ Yes ☒ No
Separatory Funnel Extraction ☐ Yes
Continuous Liquid - Liquid Extraction ☐ Yes

CAS Number		ug/l or ug/kg (Circle One)
319-84-6	Alpha-BHC	80u
319-85-7	Beta-BHC	80u
319-86-8	Delta-BHC	80u
56-89-9	Gamma-BHC (Lindane)	80u
76-44-8	Heptachlor	80u
309-00-2	Aldrin	80u
1024-57-3	Heptachlor Epoxide	80u
959-98-8	Endosulfan I	80u
60-57-1	Dieldrin	160u
72-55-9	4,4-DDT	160u
72-20-6	Endrin	160u
33213-65-9	Endosulfan II	160u
72-54-8	4,4-DDD	160u
1001-07-8	Endosulfan Sulfate	160u
50-29-3	4,4-DDT	160u
72-43-5	Methoxychlor	800u
53494-70-5	Endrin Ketone	160u
57-74-9	Chlordane	800u
8001-35-2	Toxaphene	1600u
12674-11-2	Aroclor-1016	800u
11104-28-2	Aroclor-1221	800u
11141-16-5	Aroclor-1232	800u
53469-21-9	Aroclor-1242	11,000
12672-29-6	Aroclor-1248	800u
11097-69-1	Aroclor-1254	800u
11096-82-5	Aroclor-1260	800u

 V_i = Volume of extract injected (ul) V_B = Volume of water extracted (ml) W_g = Weight of sample extracted (g) V_i = Volume of total extract (ul)

V_B NA W_g 24.5 V_i 20,000 V_i 2.0

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Form 1

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US0241

Essex Eco Laboratory

PA'S TEL

5H 734626-6.2-63

Tentatively Identified Compounds

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Home ENSECO INC.
New York Department of
Environmental Conservation

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Sample Number:

SH 734626-13 C1

Concentration (Low) Medium (Circle One)Date Extracted/Prepared 6-10-87Date Analyzed 6-18-87Conc/Dil Factor: 9.5Percent Moisture (Decanted) 18GPC Cleanup ☐ Yes ☒ NoSeparatory Funnel Extraction ☐ YesContinuous Liquid - Liquid Extraction ☒ Yes

CAS Number		ug/l or ug/Kg (Circle One)
106-95-2	Phenol	3800u
111-44-4	bis(2-Chloroethyl) Ether	3800u
95-57-8	2-Chlorophenol	3800u
541-73-1	1,3-Dichlorobenzene	3800u
106-46-7	1,4-Dichlorobenzene	3800u
100-51-6	Benzyl Alcohol	3800u
95-50-1	1,2-Dichlorobenzene	3800u
95-46-7	2-Methylphenol	3800u
39636-32-9	bis(2-chloroisopropyl) Ether	3800u
106-44-5	4-Methylphenol	3800u
621-64-7	N-Nitroso-Di-n-Propylamine	3800u
67-72-1	Hexachloroethane	3800u
98-95-3	Nitrobenzene	3800u
78-59-1	Isophorone	3800u
85-75-5	2-Nitrophenol	3800u
105-67-9	2,4-Dimethylphenol	3800u
65-85-0	Benzoic Acid	1900u
111-91-1	bis(2-Chloroethoxy) Methane	3800u
120-83-2	2,4-Dichlorophenol	3800u
120-82-1	1,2,4-Trichlorobenzene	2800u
91-20-3	4-Chloroaniline	3800u
106-47-8	4-Chloroaniline	3800u
87-65-3	Hexachlorobutadiene	3800u
59-50-7	4-Chloro-3-Methylphenol	3800u
91-57-6	2-Methylnaphthalene	3800u
77-47-4	Hexachlorocyclopentadiene	3800u
88-06-2	2,4,6-Trichlorophenol	3800u
95-85-4	2,4,5-Trichlorophenol	1900u
91-58-7	2-Chloronaphthalene	3600u
85-74-4	2-Nitroaniline	1900u
131-11-3	Dimethyl Phthalate	3800u
208-96-8	Acenaphthylene	3800u
99-09-2	3-Nitroaniline	1700u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	3800u
51-28-5	2,4-Dinitrophenol	1900u
100-02-7	4-Nitrophenol	1900u
132-64-9	Dibenzofuran	3800u
121-14-2	2,4-Dinitrotoluene	3800u
606-20-2	2,6-Dinitrotoluene	3800u
84-66-2	Diethylphthalate	3800u
7005-72-3	4-Chlorophenyl-phenylether	3800u
86-73-7	Fluorene	3800u
100-01-6	4-Nitroaniline	1900u
534-52-1	4,6-Dinitro-2-Methylphenol	1900u
85-30-6	N-Nitrosodiphenylamine (1)	3800u
101-55-3	4-Bromophenyl-phenylether	3800u
118-74-1	Hexachlorobenzene	3800u
87-86-5	Pentachlorophenol	1700u
85-01-8	Phenanthrene	3800u
120-12-7	Anthracene	3800u
84-74-2	Di-n-Butylphthalate	3800u
205-44-0	Fluoranthene	3800u
129-00-0	Pyrene	2800u
95-68-7	Di-n-butylphthalate	1600u
91-84-1	3,3-Dichlorobenzidine	7000u
56-55-3	Benzo(a)Anthracene	1500u
117-81-7	bis(2-Ethylhexyl) Phthalate	8500u
218-01-9	Chrysene	1700u
117-84-0	Di-n-Octyl Phthalate	6500u
205-99-2	Benzo(b)Fluoranthene	2300u
207-08-9	Benzo(k)Fluoranthene	2300u
50-32-8	Benzo(a)Pyrene	1800u
193-39-5	Indeno(1,2,3-cd)Pyrene	1200u
53-70-3	Dibenz(a,h)Anthracene	4100u
191-24-2	Benzo(c,h)Perylene	1200u

(1) Cannot be separated from diphenylamine

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Form 1

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7'85

US0243

Sample Number
SH7340360301

Name ERCO/ENSECO
NYC DFC

Organics Analysis Data Sheet
(Page 3)

Pesticide / PCBs

Concentration Low Medium (Circle One)
Date Extracted / Prepared 6-16-87
Date Analyzed 6-26-87
Conc/Dil Factor 10
Percent Moisture (decanted) 18 pH = 7

GPC Cleanup ☐ Yes ☒ No
Separatory Funnel Extraction ☐ Yes
Continuous Liquid - Liquid Extraction ☐ Yes

GAS Number		ug / l or ug / Kg (Circle One)
319-84-6	Alpha-BHC	80u
319-85-7	Beta-BHC	80u
319-86-8	Delta-BHC	80u
56-29-9	Gamma-BHC (Lindane)	80u
76-44-8	Heptachlor	80u
309-00-2	Aldrin	80u
1024-57-3	Heptachlor Epoxide	80u
959-96-8	Endosulfan I	160u
50-57-1	Dieldrin	160u
72-55-9	4,4'-DDE	160u
72-20-6	Endrin	160u
33213-65-9	Endosulfan II	160u
72-54-8	4,4'-DDD	160u
1031-07-8	Endosulfan Sulfate	160u
50-29-3	4,4'-DDT	800u
72-43-5	Methoxychlor	160u
53494-70-5	Endrin Ketone	800u
57-74-9	Chlordane	1600u
8001-35-2	Toxaphene	800u
12674-11-2	Aroclor-1016	800u
11104-28-2	Aroclor-1221	800u
11141-16-5	Aroclor-1232	800u
53469-21-9	Aroclor-1242	800u
12672-77-0	Aroclor-1248	800u
11097-69-1	Aroclor-1254	800u
11096-82-5	Aroclor-1260	800u

V_i = Volume of extract injected (ul)

V_B = Volume of water extracted (ml)

W_B = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_B NA or W_B 25.1 V_i 20,000 V_t 2.0

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ecology and environment

239 7

US0244

Name: Ensero Free Laboratory
NYS DEC

Sample Number
54734131-03-01

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	BNA	1297	2100
2.	Unknown	BNA	1352	1700
3.	Unknown	BNA	1393	2700
4.	Unknown	BNA	1443	3400
5.	Unknown	BNA	1496	1000
6.	Unknown	BNA	1543	1600
7.	Unknown Steroid (C ₂₉ H ₅₀ O isomer)	BNA	2032	2700
8.				
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29.				
30.				

REFERENCE 7

A-59



To: CALOCERINOS & SPINA ENGINEERS
1030 SEVENTH NORTH STREET
LIVERPOOL, NY 13088

Date: Jul 28 1987

Attention: CLARKSON/SALINA

SAMPLE #3411

PAGE 1 OF 2

LABORATORY ANALYSIS REPORT

SAMPLE SUMMARY

CLIENT : CALOCERINOS & SPINA ENGINEERS

DATE RECEIVED : 05/22/87

JOB # : 905.019.02

DATE COLLECTED : 05/22/87

LOCATION : SALINA LANDFILL, #3 SW-2

TIME COLLECTED : 1100

METHOD : 6742

PARAMETER	RESULTS	UNITS
PCB'S IN SEDIMENT AS 1221	121.	MG/KG
PCB'S IN SEDIMENT AS 1222	121.	MG/KG
PCB'S IN SEDIMENT AS 1242/1012	125.	MG/KG
PCB'S IN SEDIMENT AS 1242	74.	MG/KG
PCB'S IN SEDIMENT AS 1224	17.	MG/KG
PCB'S IN SEDIMENT AS 1220	17.0	MG/KG
PCB'S IN SEDIMENT AS 1222	17.0	MG/KG
PCB'S IN SEDIMENT AS 1222	17.0	MG/KG
BENZENE	10.50	MG/KG
1,2 DICHLORENE	10.50	MG/KG
1,3 DICHLORENE	10.50	MG/KG
1,4 DICHLORENE	10.50	MG/KG
ETHYLENE	10.50	MG/KG
TOLUENE	10.50	MG/KG



SAMPLE #3411

PAGE 2 OF 2

LABORATORY ANALYSIS REPORT

PARAMETER

RESULTS

UNITS

ortho-XYLENE

(0.50

mg/kg

para-XYLENE

(0.50

mg/kg

meta-XYLENE/CHLOROBENZENE

(0.50

mg/kg

TOTAL SOLIDS

542000.

mg/kg

analyses performed and reported on a mg/kg wet weight basis, except for TC, and/or PCB's which is expressed in mg/kg dry weight.

CS warrants that any sampling and analyses conducted as part of this report are performed in accordance with the analytical industry practices, methodologies and professional standards. CS will not assume liability for any damages resulting from deficient work or the reimbursement of cost of said work and will not accept any liability as a result of data interpretation by the client.

INVEST - ELAS #10067

APPROVED BY

DATE: 7/28/87

recycled paper

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ecology and environment



To: CALOCERINOS & SPINA ENGINEERS
1020 SEVENTH NORTH STREET
LIVERPOOL, NY 13088

Date: Jul 28 1987

Attention: CLARKSON/SALINA

SAMPLE #3+12

LABORATORY ANALYSIS REPORT

SAMPLE SUMMARY

CLIENT : CALOCERINOS & SPINA ENGINEERS

DATE RECEIVED : 05/22/87

JOB # : 935.019.00

DATE COLLECTED : 05/22/87

LOCATION : SALINA LANDFILL, #3 SW-2

TIME COLLECTED : 1100

METHOD : GRAE

PARAMETER	RESULTS	UNITS
ANTIMONY	15.	mg/kg*
ARSENIC	10.02	mg/kg*
BERYLLIUM	0.05	mg/kg*
CADMIUM	3.4	mg/kg*
CHROMIUM-T	430.	mg/kg*
COPPER	415.	mg/kg*
LEAD	62.	mg/kg*
MERCURY	10.02	mg/kg*
NICKEL	110.	mg/kg*
SELENIUM	1.0	mg/kg*
SILVER	1.5	mg/kg*
THALLIUM	10.	mg/kg*
ZINC	180.	mg/kg*
TOTAL SOLIDS	542000.	mg/kg

* WET WEIGHT

Warrants that any sampling and analyses conducted as part of this report are performed in accordance with the analytical industries recognized methodologies and professional standards. CS will not assume liability for any damages resulting from deficient work other than reperformance or cost of said work and will not accept any liability as a result of data interpretation by the client.

1/SECH - 5000-110257

APPROVED BY: Amad T. 1.0 L.

DATE: 7/28/87



(Part 5a) Pg 15 of 25

New York State
Approved Laboratory
(918) 440-3788

To: CALOCERINOS & SPINA ENGINEERS
1020 SEVENTH NORTH STREET
LIVERPOOL, NY 13088

Date: Jul 28 1987

Attention: CLARKSON/SALINA

SAMPLE #3411
LABORATORY ANALYSIS REPORT

SAMPLE SUMMARY

CLIENT : CALOCERINOS & SPINA ENGINEERS

DATE RECEIVED : 05/22/87

JCS # : 905.015.00

DATE COLLECTED : 05/22/87

LOCATION : SALINA LANDFILL, #3 SW-2

TIME COLLECTED : 1100

METHOD : GRAE

PEPA Extraction Procedure and Analysis as given in "Test Methods for Evaluating
Solid Waste-Physical Chemical Methods". USEPA, 1982, SW-846

Parameter	Maximum Extraction Level	Analyzed Level
Arsenic	5.0 mg/l	(1.0 mg/l)
Baryum	100.0 mg/l	(10. mg/l)
Cadmium	1.0 mg/l	(0.5 mg/l)
Chromium-Total	5.0 mg/l	(0.5 mg/l)
Copper	5.0 mg/l	(1.0 mg/l)
Mercury	0.2 mg/l	(0.01 mg/l)
Selenium	1.0 mg/l	(1.0 mg/l)
Silver	5.0 mg/l	(1.0 mg/l)

To determine whether sample is to be considered Hazardous, please compare
reported values to maximum allowable levels.

NYS204 - ELAP #10027

APPROVED BY:

Conrad T. [Signature]

DATE:

7/28/87

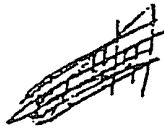
A-63

REFERENCE 8

A-64

CHAIN OF CUSTODY RECORD

[illegible]



Erasmus ! Erasmus !

JOB NO. 2235.0015.17

DATE COLLECTED 3-20-86 DATE REC'D. 3-20-86 DATE ANALYZED _____

DATE COLLECTED 3-20-86

DATE RECD. 3-20-86

DATE ANALYZED

RECEIVED
APR 4 - 1966
FBI - NEW YORK

[illegible]

Units: mg / (pam) unless otherwise noted

အမည်အားဖြင့်:

3. 1956

US0253

REFERENCE 9

A-67

IN 11/10 - FIVE - Solid / 11/16. Waste

Ley Creek Dredged Material Area

*Relation to
Salina Turn Landfill
734036*

*Study of Ley Creek
approx. 1/4 to 1/2 mile upstream of*

General Motors Corporation Salina Turn L.F. area
Fisher Guide Division
Syracuse, New York

July 1989



O'BRIEN & GERE

EXECUTIVE SUMMARY

The Ley Creek Site is situated in the Town of Salina, Onondaga County, New York. Specifically, the project area lies along the south bank of Ley Creek, and occupies an area which extends approximately 5200 ft, situated between the Town of Salina Garage to the west and Townline Road to the east.

Previous investigations at the site revealed that polychlorinated biphenyls (PCBs) were present in materials which had been periodically dredged from the creek and deposited on-site. The PCBs were reported to have originated from materials previously used in hydraulic dredging operations at the Inland Fisher Guide (IFG) Facility.

As a result, a soil boring and hydrogeologic investigation has been conducted to characterize the horizontal and vertical extent of the waste materials and ground water quality impacts. In addition, a risk assessment has been prepared to identify potential exposure pathways and receptors.

The completion of these investigations has resulted in the following conclusions:

1. Portions of Ley Creek, including the area adjacent to the site, have been dredged at various times. The dredged materials, containing PCBs, were deposited along the south bank of the creek or used for restoration projects.
2. The on-site geology is characterized by the dredged fill materials at the surface overlying silts, clays, and fine-grained deposits, which are superposed on dense glacial till.

The dredged materials are comprised of the fine-grained lacustrine and fluvial deposits.

3. Ground water flow across the site is in a northerly direction toward Ley Creek. Ground water flow velocity varies from 0.05 ft/day to 0.11 ft/day during dry and wet weather conditions respectively. The average yearly ground water discharge to Ley Creek from the south side of the site is estimated to be 11,300 gallons/day.
4. PCB concentrations in the on-site soils ranged from less than detectable to 180 ppm. With the exception of boring B6, soils containing PCB concentrations in excess of 50 mg/kg are limited to an area extending approximately 1,600 ft. west of Townline Road.
5. Sediment samples collected from the Ley Creek stream bed indicate that detectable concentrations of PCBs are contained within the boundaries of the site. The highest value (8.3 mg/kg) was measured immediately downstream of the IFG Outfall. Upstream and downstream samples collected near the site boundaries did not contain detectable levels of PCBs.
6. Ground water samples collected from the site, including the up-gradient sample, exhibited concentrations of PCBs in excess of the NYS Class GA ground water standard of 0.01 ug/l. The highest concentration of PCBs in the ground water was measured in the central portion of the site, between and including monitoring wells MW8 and MW13. This coincides with the highest PCB concentrations measured in soil boring samples B1 to B11, located in the same general vicinity.

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7. Surface water samples collected at the upstream (SW-3) and furthest downstream (SW-1) areas did not exhibit detectable levels of PCBs. However, a surface water sample collected immediately downgradient of the IFG outfall exhibited a PCB concentration of 1.4 ug/l during the 4/89 wet weather sampling event. Detectable levels of PCBs were not detected at sample locations during the dry weather (10/88) sampling event.
8. Air monitoring samples were collected at various upwind and downwind locations encompassing the site. The results of all samples were less than detectable, with a detection limit of 0.001 mg/m³. The Threshold Limit Value for PCBs is 0.5 mg/m³.
9. The mass transport of PCBs into Ley Creek from the site has been calculated to be 0.15 gm/day, resulting in a projected PCB concentration for the surface water of Ley Creek at 0.0028 ug/l. The calculated PCB concentration of 0.0028 ug/l is below the NYS Class A standard of 0.01 ug/l for human health. Although this calculated PCB concentration exceeds the 0.001 ug/l standard for aquatic life, surface water samples collected downstream did not detect PCBs within Ley Creek.
10. Under the assumed worst-case conditions, it was estimated that adults and children ingesting low-level PCB residues as a result of coming into contact with contaminated soils would incur an incremental lifetime risk of cancer in the range of 7.63×10^{-7} to 1.89×10^{-8} , a range of risks which is

SECTION 1 - INTRODUCTION

1.01 Project Background

Due to flooding problems in the Ley Creek drainage basin, periodic dredging of Ley Creek has been performed by the Onondaga County Department of Drainage and Sanitation (OCDDS) from the early 1970's to 1983. Dredged materials generated by this activity were placed along the south bank of the creek or used for land restoration projects. A hydrogeologic investigation of Ley Creek completed by EDI Engineering and Science (EDI 1985A) pursuant to a SPDES Consent Order (Case #7-0383) indicated the presence of polychlorinated biphenyls (PCBs) in the dredged material there. The PCBs, specifically identified as Aroclor 1248, were reported to have originated from material previously used in the plant hydraulic die casting operations.

A subsequent study of the area along Ley Creek was completed by O'Brien & Gere Engineers (OBG) in April 1987. This field investigation identified material containing PCBs within a 1,600 ft. section of the south bank of Ley Creek, downstream from the General Motors (GM) Inland Fisher Guide (IFG) plant outfall. In response to these findings, the New York State Department of Environmental Conservation (NYSDEC) issued a Consent Order requiring GM-Inland Fisher Guide to develop and implement a field investigation program designed to determine the areal distribution and vertical extent of PCBs at the Ley Creek Site, and to identify any potential on-site and off-site releases or migration of PCBs.

The investigation described in this report supplements the previous investigations along the south bank of Ley Creek from the

down of Salina Highway Garage to Townline Road, and includes investigations along the north bank of Ley Creek. The study area is illustrated on Figure 1. The field investigations were performed in accordance with the procedures and protocols outlined on the approved Work Plan dated October, 1987.

2.02 Project Purpose and Scope

The purpose of the field investigation was to determine the areal and vertical extent of PCBs at the Ley Creek site, to define potential on-site and/or off-site releases or migration of PCBs, and to complete a risk assessment to evaluate the impacts of any potential receptors.

The following investigative efforts identified in the approved Work Plan were completed to provide data necessary to meet these project objectives:

1. The collection and laboratory analysis of sediment and surface waters samples to determine the concentration, if any, of PCBs and to assess potential transport mechanisms and receptors.
2. The installation of 23 soil borings, including soil sampling and laboratory analysis for PCBs, along the south and north side of Ley Creek to characterize the site geology and chemistry.
3. The installation of six shallow monitoring wells to supplement the existing wells at the site, and provide hydrogeologic and ground water quality data.
4. Ground water elevation monitoring to provide data necessary to evaluate ground water flow direction and hydraulic gradients.